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ABSTRACT

Like many developing countries, Mauritius has invested massively in its education system in the hope of redressing inequalities among its ethnically mixed population and developing the economy through the provision of manpower. But Mauritius is a very economically troubled country, and providing educational equity will be extremely difficult. In general, at present, Mauritian schools are inefficient, and suffer from high drop-out rates, high illiteracy, a lack of teaching and learning materials, and an inadequate supply of suitably trained teachers. There is a wide disparity between what the schools are providing and what employers want and need. Moreover, educational opportunities are unfairly distributed: urban schools are much better than rural schools, and government-sponsored education is ineffectual in dealing with the consequences of their students' poverty. Despite these problems, the Mauritian education system is genuinely geared towards meeting the demands of equity and efficiency as best it can. (KH)

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TOWARDS EQUITY AND EFFICIENCY IN THE EDUCATION SYSTEM
OF MAURITIUS

by

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Paper presented at the Annual Conference of the Australian and
New Zealand Comparative International Education Society (10th,
Sydney, NSW, Australia, November 24-26, 1982).

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I INTRODUCTION

This paper presents a brief analysis of the concepts of equity and efficiency and how they apply to the Mauritian educational scene. Owing to the paucity of published materials relating to that tiny Indian Ocean island, and the difficulty in obtaining any, especially recent publications, directly from the source, this paper has had to confine itself to the context of the former government's efforts in education.

The conservative Labour Party under the leadership of Sir Seewoosagur Ramgoolam has governed Mauritius since the island obtained its independence from Great Britain in 1968. On June 2, 1982, his government was roundly defeated at the polls by the Mouvement Militant Mauricien (MMM) and its coalition partner, the Parti Socialiste Mauricien (PSM) who, together, won all 60 seats. The Labour government was perceived by all to be corrupt, inefficient, complacent and out of touch with the needs and aspirations of the people. This pervasive view is expressed by a teacher who was interviewed by the local newspaper Weekend (June 20, 1982:19).

Their greatest mistake was that they did not establish contact with the people; nor did they move with the times...The government always ignored the protests of those who tried to do something against the injustices. With the passing of time fewer people protested because they were being threatened with heavy consequences if they did. Their future was at stake, the growth of their career could be impeded, and so on.

A few months after the election, however, on October 22, 1982, the Finance Minister, Paul Béranger, a founding member of the MMM and architect of its overwhelming electoral success, resigned. His decision was prompted by disagreements he had with some Cabinet Ministers over the way to handle the country's grave economic ills. Before the election everyone knew that the country was deeply in debt. But the extent of that debt - the country's virtual bankruptcy - came as a shock to the new government and the people. Upon assuming power, the new Prime Minister, Aneerood Jugnauth, gave Paul Béranger carte blanche to return the island to a sound economic footing. When the financial situation was discovered to be perilous, requests for massive Western loans were immediately made. The only positive response came from the International Monetary Fund (IMF) - naturally with many strings attached.

The prime condition for granting the massive Rs.1,000,000,000 loan (with Rs.180,000,000 to be granted as a first instalment by December 1982 for job creation and crop diversification schemes) was for the Mauritian government to implement a national austerity programme. Béranger was recalled to office as he was believed to be the only person capable of persuading the stunned people of Mauritius to accept the austerity measures; and the obstructionist PSM was ousted from the coalition.

The implications of the IMF package will affect every facet of life in Mauritius, and the consequences for education in particular will be far-reaching. One of the IMF's stipulations is that aid to private secondary schools must be revoked. In a desperate bid to

boost its flagging electoral hopes, the Labour government promised financial aid to the private secondary schools literally on the eve of the 1977 elections and was thus returned to another five-year term of office.

By 1982 it was clear that the people were fed up with the incompetent, self-seeking gerontocracy they had known, feared and lost respect for over the years. By comparison, the perceived hallmarks of the new government are its youth and sincerity, its dynamism, nationalism and desire to carry out much-needed socialist reforms. Their average age is 36 years; most are graduates from French and English universities and seem deeply committed to their pledge to "sauve l'île Maurice".¹

As the people of Mauritius move into a new era under the MMM, they do so with their optimism for the future somewhat dampened. The task ahead is fraught with many difficulties but expectations still run high. The country is plagued with the long-standing problems that face any small, mono-crop, multi-cultural developing nation.

Since no formal statements on education policy have come to hand after the recent election, it is assumed that the former government's general educational objectives will not be substantially altered in the near future. The Annual Report on Education for 1977 (1980:1) states these objectives as follows:

- a) to democratise the education system;
- b) to spread out schools evenly over the country so as to balance the education facilities between urban and rural areas;
- c) to diversify the curricula;
- d) to make an integrated approach to the concept of education as a life-long process for the development of a well-adjusted personality; and
- e) to adjust the education system to meet manpower requirements.

The economic, cultural, social and educational needs of the Mauritian people are numerous and diverse. As reported by Peerthum (1982:1), the MMM government relies for the success of its overall programme on -

...une mobilisation permanente des masses...
pour...la remise en ordre et la relance de
l'économie et la changement graduel des
structures de l'économie capitaliste visant
à amener le développement d'une société libre,
égalitaire, juste et participative.²

-
1. Translation: to save the island of Mauritius.
 2. Translation: a permanent mobilisation of the masses so as to put the economy back in order and to keep it moving and to effect the gradual change of the capitalist infrastructure with a view to bringing about the development of a free, egalitarian, just and participative society.

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Resources to education have never been able to keep up with the increase in population. (See Table 1 in the Appendix, page 16.) Each year about a fifth of the national budget is allocated to education and, as such, is the largest single item of expenditure. Table 2 below shows the recurrent, capital and total expenditure on education from 1974 to 1980 as provided by the Ministry of Economic Planning and Development (1978:34 and 1981:56).

Table 2: Expenditure on Education in Mauritius
(Rs. million) from 1974 to 1980

<u>Expenditure</u>	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
Recurrent	86.4	125.8	194.5	244.2	n.a.	330.1
Capital	10.2	18.2	18.3	46.4	n.a.	72.9
Total	96.6	144.0	212.8	290.6	n.a.	403.0

Like many other developing countries, Mauritius has invested massively in its education system in the hope of redressing inequalities among its mixed population and developing the economy through the provision of manpower. At present, Mauritius has a 6-5-2 education structure. (See Figure 1 in the Appendix, page 17.) Primary education is of 6/7 years duration leading to the Primary Leaving Certificate (PLC). This is followed by five years of secondary education leading to the Cambridge School Certificate (CSC) and a further two years leading to the Cambridge Higher School Certificate (CHSC). It is the choice of direction, and the type of planning and management of educational policy in Mauritius that is the subject of this paper.

II Socio-Economic Background

Mauritius, with its multi-cultural population of 960,000 (estimated for 1980, in Lane, 1982:560), possesses no natural resources, so she must rely on her 787 square miles of land and on her abundant labour supply for economic development. The economy is based on a single cash crop, sugar, although attempts have been made recently to diversify crops and introduce light industry and manufacturing. Agriculture absorbs 29% of the labour force, industry and commerce 28% and the government sector about 30%. (Lane, 1982:560.) Owing to a profound contempt of manual labour, originating in the turbulent history of the island's slave trade, anyone possessing a certificate of education aspires to a white-collar job. The Civil Service is most often sought as a security against having to work in the fields or in the trades. At present, unemployment and inflation run at about 20% and 14% respectively, the government sector is saturated and there is chronic shortage of skilled labour and technicians. Yet the demand for more education of the academic kind continues unabated.

Today 67% of Mauritians are of Indian origin (51% Hindus and 16% Muslim), 29% are Creoles (of mixed African, Indian, Chinese and European descent), 3% are Chinese and 1% European. The natural

increase rate in population growth runs at about 2.0% per annum and pressure on all resources is great. (Lane, 1982:560.) Dominated by the Dutch from 1598-1710, the French from 1715-1810 and the British from 1810-1968, the island of Mauritius has struggled in the fourteen years of its independence to come to grips with the problems of its polyglot society and colonial legacy. The prime objectives of the MMM government are to create national unity, develop the economy and redress social and economic imbalances.

III An Analysis of the Equity and Efficiency of the Mauritian System of Education

Various definitions of the terms 'equity' and 'efficiency' exist, some being more useful than others. As well, developing countries have tended to redefine and apply these notions to suit their particular contexts. For the purposes of this paper, then, reference will be made to C. Arnold Anderson's criteria. (1964:15-18 and 1971:216-7.)

According to Anderson, there are at least four distinct variants of the notion of equity, each bearing different implications for educational policy. 1) Provide each child with the same amount of schooling. Mauritius, like other countries, has not adopted this basically undemocratic and inefficient policy.

2) Provide a certain minimum schooling to each child, thus eradicating pockets of total ignorance while simultaneously allowing more responsive areas to obtain more schooling. In the years leading up to independence, Mauritian politicians became committed to the idea of national literacy. Many of them felt that it was better to spend money in building new primary schools to reduce wholesale illiteracy than to provide further education for those who already had some schooling. The basic aim of the government's educational programme as enunciated by paragraph 105 of "The Plan for Mauritius" was to ensure primary education for all "on the principle that a literate and intelligent population is the best guarantee of future economic wisdom." (Meade, 1961:206.) This policy led to a rapid increase in enrolments in primary schools. Meade (1961:206) cites figures which show just how rapid the rise had been.

Table 3: Increase in the Number of Primary School Pupils from 1955 to 1959

	1955/56	1956/57	1957/58	1958/59	1959/60	% Incr. 1955/ 1959
In government and aided schools	73,510	74,288	89,845	100,551	107,487	46
In private schools	11,936	15,146	12,446	15,078	18,686	60
In all schools	85,446	89,434	102,291	115,629	126,173	48
Cost to government in rupees (million)	9.44	9.94	10.83	14.01	15.14	57

The rapid expansion of the primary sector in the decade preceding Independence did not produce literacy as it was hoped it would. Many existing primary schools had to go on double shift to cater for the extra pupils. In this way many children had the benefit of two and a half day's schooling per week which was considered to be better than none at all. Meade expressed his doubts on the ability of the 1950s Mauritian primary school system to produce literacy. He claimed: "In fact, it is not too much to say that the system at present operating is more likely to produce illiteracy." He went on to criticise the government for "undue or too early preoccupation with primary schooling for all as opposed to a more evenly balanced programme of educational development at all levels." (1964:207.)

It is true that the "Education for All" policy has stretched even further the inadequate financial provisions for education, and that the politicians' concern for quantity (equity) rather than quality (efficiency) has resulted in appalling wastage. However, the lack of adequate resources is not the only factor responsible for the failure of primary education to eradicate illiteracy. In Ramdoyal's view (1977:127), Mauritius was right to implement its bold and democratic policy of refusing education to no-one; it was wrong in not being bold enough to tackle the fundamental problems concerning the reorganization of the primary school curriculum. Independence brought with it the need for schools to cope with the real problems arising out of a constantly changing and mobile society made more complex by the linguistic and cultural aspirations of the various communities.

Primary education in Mauritius is free but not compulsory. In June 1980, 123,666 pupils attended 254 primary schools staffed by 6,162 teachers. The majority of these pupils - 93,345 - attended government schools. Aided primary school pupils numbered 26,903 while those attending non-aided schools totalled 3,418 for the same period. (Ministry of Economic Planning and Development, 1981:97.) Of the total population of children in the 5-13 age group, about 92% attend school. Since performance standards and not merely years of attendance are specified as important, this entails the repeating of grades, particularly Standard 6 leading to the PLC examination. Not much remedial teaching is available since teachers, parents and pupils rely on the costly private tuition system.

There are fewer and generally inferior schools in rural areas where attendance is erratic due to the frequent absence of pupils during planting and harvesting times; shoeless pupils are not admitted to class as are those with communicable diseases such as head lice and worms. It is worth noting that not a single rupee was spent on the Primary Schools Health Service in 1979/80. (Ministry of Finance, 1981:55.) Since rural health services in general are woefully inadequate, many primary school pupils receive a haphazard education, and the wastage rate at this level is unnecessarily high.

It can be argued, then, that equity in primary schools does exist in theory but not in practice. Socio-economic conditions and geographical location militate against equity conditions being fulfilled in the absence of the government's taking a real stand to overcome these perennial problems.

3) Assure each individual sufficient education to reach his/her potential for mental development. As Anderson points out (1964:15), only a wealthy nation would try to meet this equity stipulation in

anything like its full implications. In Mauritius, as elsewhere, these potentials are still largely defined in conventional academic terms. Hence it is not surprising that the greatest proportion of educational investment goes to this sector.

The promotion of pupils is automatic from Standard 1 to Standard 6 at which point about 50% are weeded out annually by the PLC examination. Thus virtually half of the primary school population is prevented from reaching its actual potential if this is defined more broadly. Since teaching of the rigidly academic syllabus is geared primarily to the passing of the PLC and Junior Scholarships Examination, rote learning is encouraged and an artificially high value is placed on acquiring academic education certificates. This leaves little room for the development of innovation, creativity, initiative and individual competencies. Class sizes on the average are large - 1:50 - so teachers tend to concentrate on abler students, leaving the rest to fall back onto the private tuition system of which many teachers themselves are a part after school hours.

The teaching/learning task is further complicated by the language policy that has been in force since 1957. English is still the official language but few speak or write it confidently; the dominant language of mass media communication is French; the mother tongue of the majority of Mauritians is an oriental language; and virtually everyone communicates in Kreol, the lingua franca of the island. The question facing policy makers for more than a century has been what language to choose as the medium of instruction, especially in primary schools. Taking into account political, religious, social and cultural considerations, the Education Ordinance of 1957 decreed that any one vernacular language was to be used as the teaching medium up to Standard 3 and replaced by English from Standard 4. French and oriental languages were to be taught as optional languages in other than French-medium or oriental-medium primary schools.

It is easy to see how the multiplicity of languages taught in primary schools has affected the attainment of literacy in any of the languages taught. In Meade's view (1961:210), it would -

seem equitable as well as educational desirable to omit French from the subjects offered in the Junior Scholarships Examinations. If that exam is restricted, as it should be, to English, arithmetic and geography or general knowledge, with or without a paper incorporating intelligence tests, all children would have a fair chance, and Mauritius being as examination-conscious as she is, the artificially-fostered demands (my emphasis) for other languages than English would probably disappear over-night.

He goes on to recommend that French and oriental languages should be taught out of schools to those primary school pupils whose parents desire these languages be learned, and that these languages be offered as second languages in secondary schools. Meade's recommendations make sound educational sense as the burden of learning two or three languages at an early age is an inordinate one. But he ignores the political and social repercussions of implementing such a policy which would be, and has in the past been, enormous.

The present Minister of Education, Ramduth Jadoo, illustrates the delicacy with which his ministry has to come to terms with this long-standing issue. In a recent statement to the press (Le Mauricien,

Jaddoo was quoted as saying:

Nous sommes pour l'entrée formelle de langage de l'environnement à l'école. Le créole et le bhojpuri en particulier y auront droit de cité...il n'y aura pas de rigidité de la part du gouvernement. Que l'on se dise bien que le français ne sera pas exclu.³

Summing up, then, it can be seen that the decision to provide education for all was a bold and welcomed step; it was, however, poorly planned. Although the country's literacy rate in 1977 was quoted as 80% by Lane (1982:560), few Mauritians, especially teachers, accept this figure as other than artificially high, "cooked" by a government wishing to justify its educational policies. Functional literacy levels in real terms are alarmingly low when considering the amount of investment in the primary education sector - 49.87% in 1977. (Ministry of Education, 1980:30.) It is on this first level that curriculum changes are greatly needed if primary education is to act as the cornerstone of meaningful social and economic development. For these changes to have any real value, however, they must be accompanied by bold and enlightened changes in the secondary level as well.

The demand for secondary schooling exceeds supply in all areas. The pattern of secondary education management has not changed since French colonial times when private enterprise established and maintained most of the secondary schools. In 1980, of the 81,946 pupils attending the 148 secondary schools, a little over 3,000 obtained places in the highly competitive 8 government secondary schools. All of these are located in urban areas. The rest found their way into aided schools or non-aided schools. In 1980, 19,663 pupils were enrolled in status A schools, 51,465 in status B schools, and 61 in non-aided schools, according to the Ministry of Economic Planning and Development (1981:98). Although some of the more prestigious aided secondary schools are on a par with their government counterparts, the quality of education, resources and facilities in many of the aided schools are markedly inferior.

The enormous investment in expanding secondary education requires examination in equity and efficiency terms if investment is to continue at this rate. It is precisely this sector of educational expenditure that has been seized upon by the IMF as no longer tenable. However, equity considerations will be violated when funding is withdrawn from aided schools but efficiency is likely to increase. And since public interest in education varies with the level and degree of economic activity in an area, equity can be said to exist among urban localities but not on a national level.

4) Continue opportunities for schooling so long as the gain in learning for given inputs of resources reaches some agreed upon amount. This equity norm is usually defined in terms of examination passes or the judgement by parents and teachers that "it is no longer worthwhile keeping them at school." When this norm is examined closely it raises

3. Translation: We are in favour of the formal entry into schools of the language of the environment. Kreol and Bhojpuri in particular are the right of every citizen and the government will not be rigid on this issue. Let it also be said that French will not be excluded.

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questions about the presumed outcomes of schools, of teaching versus learning, and about the choice of various sorts of education and training.

Education in the 8 government secondary schools is mainly of the grammar school type. John Kennedy College for Boys (1965) is the only one that provides a comprehensive type of secondary education. Until 1977, fees were charged in all secondary schools except in the case of scholarship holders and those pupils whose parents could not afford to pay the fees. In 1977 there were 13 grant-aided secondary schools with a total enrolment of 7,003 pupils. Eight of these schools were for girls: 6 Loreto Convent schools, the Collège du Bon et Perpétuel Secours, and the Hindu Girls' College. Four were schools for boys: St Joseph College, St Mary's College, Islamic Cultural College and Collège du St Esprit. St Andrew's was the only co-educational establishment. All government secondary schools provide a seven-year course leading up to the CHSC. Some of the grant-aided secondary schools provide only a five-year course leading up to the CSC. (Ramdoyal, 1977:141.)

As a result of the increasing demand for secondary education, admission into the government and better aided secondary schools is now very selective. After reserving places for the winners of the Junior Scholarships, admissions are made in order of merit according to the candidates' results in the Junior Scholarships examination. A large number of private secondary schools have mushroomed in the last decade to absorb the vast majority of pupils desiring secondary education. Too many of these schools are mere profit-making concerns and, as Ramdoyal (1977:141) describes them, "little more than factories for the mass production of certificate holders." Thus competition among these schools is very keen as to which school will score the largest number of passes at the public examinations since their "efficiency" is judged by parents on this sole criterion.

Consequent upon the Ramphul Commission's Report of 1973, four Private Secondary Schools Authorities were set up to organize, rationalize and standardize conditions and facilities in Hindu, Muslim, Catholic and Anglican schools. As well, a more equitable scheme of subsidy and distribution of education services is being implemented to ensure that imbalances are minimized. With the aid of the World Bank, for example, six centralized laboratories and workshops have been set up for the use of private school pupils, again mainly in urban areas.

Although the Mauritian government is well aware that secondary education is the weakest link in the island's education system, and is now determined to resist the expansion of academic education, the authorities have hedged from interfering with the dominance held by the English Scholarships available at the end of the Form VI. These overseas scholarships have been regarded by educationists in Mauritius as a veritable thorn in the flesh. The traditional practice of sending children abroad for higher education is long-standing and socially desirable. And the possession of an English Scholarship is viewed as a prize rather than as a means to further intellectual development, thus distorting the meaning of education. However, the University of Mauritius consists of three faculties only: the Schools of Administration, Agriculture and Industrial Technology. It is little wonder, then, that the academically-oriented look to Europe and India for their further education.

The exam-ridden system imbues parents, teachers and pupils with a false set of values regarding 'success'. Many teachers supplement their incomes by working after hours as private tutors to those who can afford them. Even quite poor parents will scrimp to pay for their children's private tuition. This system has given rise to long-standing complaints from educationists. The private tuition system originated in the early nineteenth century in the desire of certain parents not to be outdone by others, and more especially in the belief that the teaching in schools was not good enough to allow a child to succeed in obtaining the highest distinctions - the coveted English Scholarships - without additional tuition. Private teaching, even to primary pupils, has for a long time in Mauritius been the rule. Many educationists believe that really good teaching coupled with a more realistic and modern curriculum would do much towards discontinuing or, at any rate, diminishing this pernicious and costly practice.

The very existence in Mauritius of this pervasive 'shadow' educational network implicitly condemns and undermines the entire education system. The teaching/learning processes are all too often mechanical and apathetic because the 'real' learning takes place after school. Yet over 50% fail to obtain their first education certificate, a further 60% fail to obtain their second certificate at the end of Form III, and too many are barely literate in any language. These alarming facts point, in part, to substantial changes being required in curricula and teaching and learning practices. So long as the race for high academic grades continues, countless children will be intensively 'crammed' from quite an early age, and their parents will continue to pay heavily for the private tuition they believe to be essential.

In summary, then, the Mauritian system of education is geared towards meeting the demands of equity as best it can given the political, social, economic and cultural constraints upon it. However, while the pursuit of equity is laudable in itself, the efficiency of the system requires close scrutiny as well.

* * *

Each of the four variants of equity is a goal or an end: the acquisition of knowledge and skills, however they may be defined. Efficiency, on the other hand, involves the concept of rationalisation: to get the most out of the least, whatever the nature of the ends may be. The first two efficiency criteria listed below are based on the assumption that learning per se is the goal, and any given total of resources invested in education will then be most 'efficiently' used when the total aggregate of learning is maximized. The fourth equity variant, then, clearly merges into the first efficiency criterion in that ability to learn is defined narrowly.

1) Select individuals for further schooling according to how much additional learning can be predicted for one person versus another and proceed to the point at which available resources to schools are used up. Those selected first will be the ones for whom the greatest increase in learning is predicted - that is, the holders of scholarships and education certificates - and this process continues up to the point at which the allocated resources are exhausted. In determining how

many resources should go into education, planners usually set a cut-off point in the learning rate. It is widely accepted that the number of children capable of gaining from any given kind of training or education will diminish with the level of schooling. Some children are capable of learning more of one kind of thing than others; and although most pupils strive to gain 'high' skills, 'low' skills are usually more in demand from employers; that is, if education is defined in bookish terms. The demand from parents and pupils for 'high' skills continues to increase in developing countries such as Mauritius because these skills are seen to be related to elite and lucrative jobs, despite the fact that job opportunities in these areas are restricted and highly competitive. Thus, since highly qualified people are needed, particularly in developing countries which want to replace expatriates with local talent, and few have the potentials required, resources tend to be concentrated on producing academic skills.

To offer educational opportunities on the basis of talent, however defined, may be efficient but it is not equitable. Pupils in Mauritius are not being adequately prepared for adjustment to the demands of their modernizing nation; yet it is inequitable to impose quotas in school streams to meet manpower needs. Manpower projection is not the function of education. So a dilemma exists in that Mauritius has been in dire need of skilled labour and technicians for some time, but investment in technical and vocational schools is at present a mere 1%, as stated in the Financial Report for the Year 1979/80 (1981: 53-4).

At present, only the John Kennedy College offers technical and vocational courses alongside the academic stream. In addition, one government central school and two senior primary schools provide free four-year courses emphasising practical education of a pre-vocational nature. Two Industrial Trade Training Centres - one at Piton and the other at Beau Bassin - have been set up with UNDP financial assistance. These centres provide training in machine shop practices; welding and metal fabrication; plumbing and pipe-fitting; carpentry and joinery; and masonry and concrete. Most of the courses lead to City and Guilds of London qualifications.

The Small Scale Industries Branch (SSIB) was set up in 1963, its general objective being to devise training programmes for the gainful employment of the jobless and seasonally employed potential of the rural labour force. The SSIB's aim is to create a cadre of skilled artisans who will have opportunities to produce items of consumer goods for the home market and souvenirs for the growing tourist trade. SSIB Training Centres are located at Triolet, Surinam, St Julien, St Pierre and Mare d'Albert. Training is provided in the following trades: Dressmaking and Embroidery, Basketry, General Handicrafts, and Leatherwork. The facilities are generally inadequate, however, and Mauritius is not getting the returns it wanted for its piece-meal investment in this sector.

There is a great disparity between the numbers of primary school leavers who, at the ages of 12/13 are too young and unskilled to enter the workforce, and those who go on to technical and vocational training. Much work needs to be done to develop the potential of these would-be early school leavers to encourage them to stay on in technical and vocational schools. A more efficient method of maximizing learning, then, would be to narrow it down to the learning that will ultimately maximize a person's economic productivity.

2) Provide schools mainly or first to those localities from which a given education investment will evoke the largest response in terms of persistence, good marks and demand for more schooling. This pragmatic criterion relies upon demonstrated aspirations and high scholastic achievements. It also takes advantage of the fact that certain localities have developed relatively favourable learning environments that support the school's efforts. In crude terms, this second efficiency norm favours the already most developed sub-populations and, in this sense, violates equity considerations. The violation is only partly mitigated by notions of rewarding group 'merit'.

Since educational planning in Mauritius is undertaken by the central government, it tends to follow this criterion explicitly. Being too small to have state authorities responsible for developing underprivileged areas, and being unwilling to allow local municipalities much say in the running of schools, Mauritius has tended to neglect the unresponsive areas. Thus rural/urban and class disparities have been exacerbated by the growing efficiency of the urban localities.

The socio-economic cost of implementing a non-aggregate efficiency policy in Mauritius has been high over the long term. The chronically most disadvantaged groups have always been the rural poor and the bulk of Malgache (dark-skinned) Creoles. For a long time the sugar estates have been in the hands of a few families, 13 white and 1 Indian. Poverty among the landless peasants is high, especially in the Hindu community which has traditionally stayed on the land as seasonal plantation workers. (Mauritian Muslims are largely urban dwellers engaged in the import-export trade.) The Malgache Creoles (descendants of slaves brought in from Madagascar) are mainly coastal fishermen and menials, if employed at all. Members of both these groups seldom go on to secondary schools, there being no tradition of scholastic or employment achievement among them. Thus few manage to be socially mobile and contribute to the economic development of the island. The academically-oriented system of education has effectively excluded them in its continued implementation of this efficiency norm. As well, this norm is fundamentally antagonistic to all the educational objectives listed on page 2 of this paper.

3) Priority investments in schools should be in the levels and localities where returns in productivity most exceed costs. The third efficiency criterion is explicitly economic in nature, whereas the other two are not necessarily so. However, in concerning itself with cost-benefits and rates-of-return, this norm tends to ignore the processes of change and the effects of current investments in education upon alternative decisions in the future. In other words, the dynamics of decision-making is, by definition, excluded. Although it is very difficult to apply this norm democratically, Mauritian education planners must seriously make an attempt in this direction if investment in education is to produce genuine, thoughtful and long-term improvements on a national level. The IMF stipulations regarding financial aid to secondary schools will force the Mauritian authorities to address themselves to this question immediately.

As Anderson and Bowman point out (1964:17): "Only the second [efficiency] criterion even begins to bring the dynamics of educational and economic developments in focus." In Mauritius, the demand for schooling at all levels has always outpaced the aggregate development of job opportunities, a factor that does not enter into either of the first two efficiency criteria since, in Mauritius, these norms have not been sufficiently modified to take job opportunities explicitly into account.

In purely efficient terms, then, Mauritius will need to address itself more energetically to the implications of the third criterion. She will need to specify the margins at which decisions to invest in education as opposed to some other area are made. But as Anderson and Bowman hasten to add (1964:18): "Unfortunately, the marginal social benefit/cost test is difficult to apply in practice, it requires major overhauling before it can be dynamized, and it is only in part compatible with equity norms." Furthermore, since the effects of education in developing countries have political, cultural, social as well as economic ramifications, the determination of expenditure which takes account only of economic considerations, even if they can be estimated, is far too limited in scope.

IV The Challenge Ahead

From this brief analysis it is clear that equity and efficiency norms are fundamentally antagonistic. However, the harmony achieved between them can be tested against assumed manpower requirements. Part of the imbalance between supply and demand for labour can be redressed by increasing job opportunities; investing in imbuing society with attitudes of respect for manual labour and a sense of pride in good workmanship; making more comprehensive-type schools available; supplying the community with adequate information about occupations in demand; and, most importantly, by lowering the wage differentials between white- and blue-collar jobs.

Considerations of equity and efficiency are undoubtedly linked with the quality of schools and the means of selecting pupils for secondary schools. The validity of these criteria can be tested by examining the vocational success of adults with different amounts and kinds of schooling. Very little emphasis is placed, for example, on experience and training acquired on the job. Making entry to jobs depend closely on certificates continues to make the schools in Mauritius the unwarranted unilateral agency for selecting and allocating individuals among adult roles in society. Unfortunately, experienced employers everywhere tend to ignore the fact that formal education is, after all, only a moderately good predictor of economic performance apart from the highest and lowest categories of jobs.

The validity and usefulness of academic examinations in the Mauritian context is questionable. This narrow concept of competence has little relevance in a developing country that urgently needs innovative people to make independence and development mean more than mere by-words. No amount of increased variety and flexibility in curricula being prepared by the Mauritian Institute of Education will offset the total rigidity of the system while academic examinations continue to have a stranglehold. Although some form of homogeneity is achieved among the educated elite, the vast majority are differentiated from them by the inequities and inefficiencies in the education system. Therefore this highly selective system diminishes whatever aggregate effect schools may have upon economic growth.

The central educational issues facing Mauritius can be grouped into three categories: 1) the inefficiency within the schools and the education system as a whole which can be measured by high drop-out rates, a high rate of illiteracy in real terms, the lack of teaching and learning materials, and the inadequate provision of suitably trained teachers and facilities; 2) a wide disparity between what the schools are producing and what employers, young people and parents want and need - these problems being evident in the numbers of educated

unemployed and underemployed; and 3) the inequities in the distribution of educational opportunities and the social and economic consequences to the poor.

Mauritius has been faced with these apparently intractable problems for a long time and she has proved unwilling or reluctant to implement any of the reforms submitted to her over the decades. There is no doubt that policy changes have been constrained and shaped by political, social, cultural and economic forces in the country. In John Simmons view (1980:7-8):

The evidence suggests that educational reforms that seek to implement an egalitarian development policy can only be effective in the context of political and economic transformation. Even seemingly minor changes such as replacing the 'irrelevant' academic curriculum with vocational training at the secondary level or reducing the 'inefficiency' of a high rate of primary school dropouts will be resisted by the current leadership because both of these mechanisms tend to reinforce and legitimize the existing power structure.

It is clear that more of the same quantity and quality of schooling is very unlikely to meet the MMM government's national development objectives. It is also clear that the bulk of investment in education in Mauritius has enhanced the power of those who are already socially and economically advantaged far more than it has enhanced the position of the disadvantaged. And what has passed for education in that country can be more appropriately termed 'anti-educational'.

The future of formal education in Mauritius has been pulled sharply into focus by the IMF's recent report on the financial situation in the island. With the prospect of fees being reintroduced in secondary schools and tertiary institutions, the pressure on secondary education will tend to lessen as will the numbers of educated unemployed. This crisis situation may prove to be the impetus for the development of non-formal and adult education schemes on the village and town level, of the reintroduction of apprenticeship schemes and practical courses, and a more effective primary and secondary school system. However, it is envisaged that the radical nature of the changes proposed by the IMF will be resisted by the number of established interests which will be adversely affected by the changes.

The next five years under the MMM will be extremely difficult ones and some of its austerity measures are likely to prove highly unpopular, especially in the short term. Much depends on the success of the MMM's economic and social policies which are based on the argument that unemployment is inherent in the capitalist mode of development, particularly in dependent economies in the process of industrialization. Nevertheless, the IMF seems determined for Mauritius not to follow the socialist path taken by her northern island neighbour, The Seychelles, but to continue to be run on capitalist lines. For example, the IMF has demanded that the subsidies on staple foods such as rice be immediately lifted - thus alienating the MMM's support among the poor - and that government control of interest rates be terminated so that these rates be allowed to fluctuate according to market conditions. (Weekend, October 3, 1982:2.) Labouring under the constraints of an enforced dependent capitalist development, the MMM's prospects in the short term, at least, for solving the unemployment problem by increasing the economic growth rate will only be promising

in the long term if the MMM resists the use of advanced capital-intensive technology provided by foreign capital which will only intensify the unemployment problem.

Since unemployment in Mauritius has not been caused by inefficiencies in an otherwise sound economic system, but is an unalterable part of the capitalist system itself, major changes in school curricula will do little to solve the problem of the educated unemployed. To suggest otherwise incorrectly attributes the cause of the problem to a mismatch between skills provided by schools and available jobs. This argument also assumed, rather naively, that schools can actually convince people to want certain jobs by merely training them for these jobs. Thus, the production of an educated supply of labour will not solve the unemployment problem unless the demand for educated labour is stimulated. Furthermore, schools cannot make people want certain kinds of jobs if these jobs are less lucrative and prestigious than others. Schools cannot operate in a vacuum; so curriculum reform in itself can only have a marginal effect.

In "Steps Towards Reform" (1980:236) Simmons outlines two theories of educational reform which define the options available to developing countries. The 'technical school' theory argues that educational structures and processes are fairly independent of political and economic forces. Change in the latter systems must come before transformation of the education system is possible. The 'structural school' theory, however, argues that reforms to the education system cannot be brought about without concomitant changes in the political and economic institutions. Only a few countries such as Cuba, China, Tanzania and Somalia have been relatively successful in achieving the twin objectives of equity and efficiency. As Simmons puts it:

The history of educational reform, both in the developed and developing countries, provides weighty evidence for the structuralist position. It appears that innovation, but not reform, is the limited achievement of the...technical school.

The challenge facing Mauritius is to implement a series of reforms which go beyond the education system to include the economic and political arenas. And if the MMM's objective is a commitment to achieving greater equality and efficiency in the Mauritian system of education, then the relationship between the haves and the have nots must be redefined.

Schools makes their largest contribution by widening pupils' horizons, by giving them a capacity to cope with new situations, and by preparing them to share in creative and productive activity. The essential task of the Mauritian educational planner, then, is to root the education system in a complex matrix of influences which makes for national structural reform. The future of Mauritius lies in the hands of its people. The MMM has succeeded in invigorating the nation with its idealism, integrity, spirit of reform and national solidarity. In order to improve the equity and efficiency of the education system, concerted efforts will have to be made to restructure the entire system with the informed participation and sustained commitment of politicians, educationists, economists, employers, teachers, parents and pupils to ensure that the national efforts being made are resolutely directed towards the realization of a self-fulfilling Mauritius.

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APPENDIX

Table 1. - Population and vital statistics - Island of Mauritius, 1921-77

Period	Population ^{1/} at mid-period	Live births	Deaths	Natural increase	Infant deaths ^{2/}	Still births	Civil marriages
1921-25 Average	379,636	14,834	11,758	3,076	2,104	1,581	2,062
1926-30 "	403,248	14,208	11,614	2,594	2,002	1,250	1,455
1931-35 "	398,647	12,490	11,839	601	1,752	1,216	1,489
1936-40 "	412,003	13,621	11,157	2,464	2,119	1,240	2,033
1941-45 "	417,838	15,027	11,927	3,100	2,318	1,240	3,333
1946-50 "	438,797	19,595	9,113	10,482	2,343	1,348	3,503
1951-55 "	522,577	23,176	7,701	15,475	1,884	1,472	3,307
1956	574,938	24,910	6,739	18,171	1,644	1,789	3,080
1957	593,070	25,273	7,603	17,670	1,397	1,800	2,903
1958	609,518	24,600	7,112	17,488	1,659	1,703	3,169
1959	627,249	23,523	6,753	17,170	1,495	1,759	3,297
1960	644,743	25,307	7,248	18,059	1,760	1,783	3,113
1961	662,368	26,092	6,505	19,587	1,618	1,963	3,484
1962	681,619	26,267	6,325	19,942	1,579	1,841	3,893
1963	695,641	27,978	6,709	21,269	1,660	1,519	3,472
1964	716,296	27,528	6,184	21,344	1,561	1,611	3,965
1965	735,245	26,279	6,337	19,942	1,685	1,557	3,976
1966	753,276	26,817	6,701	20,116	1,721	1,384	4,157
1967	767,782	23,499	6,543	16,956	1,656	1,074	3,949
1968	781,615	24,413	7,126	17,287	1,638	1,110	3,974
1969	792,893	21,719	6,428	15,291	1,528	951	3,682
1970	805,489	21,623	6,309	15,314	1,232	857	4,499
1971	816,561	20,834	6,248	14,586	1,077	842	4,346
1972	826,199	20,496	6,506	13,990	1,308	718	5,082
1973	834,781	18,974	6,525	12,449	1,201	678	5,533
1974	845,755	22,938	6,221	16,717	1,045	854	6,771
1975	856,516	21,492	6,967	14,525	1,046	896	6,883
1976	867,885	22,250	6,815	15,435	900	784	8,252
1977	881,761	22,730	6,966	15,764	1,023	712	8,421

^{1/} figures for 1963-71 have been revised in the light of the final 1972 Population Census data.

^{2/} deaths of children under 1 year of age

Structure of the Education System in Mauritius

Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Level					I					II							III		IV			
Stage					Primary					Secondary												
	Non - compulsory schooling																					
											Junior Technical schools											
											John Kennedy College											
											Nursing Catering Agriculture Sea training											
											Mauritius College of Education - primary teacher training											
											University of Mauritius Agriculture Administration Technology Special training programmes and diploma courses											
											Mauritius Institute of Education - secondary teacher training curriculum development educational research											